

The purpose of the present invention is to provide a gas barrier film having extremely excellent gas barrier property while retaining the film thickness at a predetermined thickness. A gas barrier film having a silicon oxide film formed by the plasma CVD method on the one side or both sides of a base material is provided, the silicon oxide film is characterized in that the film is comprised of the rate of components that the number of Oxygen atoms is from 170 to 200 and the number of Carbon atoms is 30 or less to the number of Si atoms of 100, and that further the film has a peak position of IR absorption band based on the stretching vibration of Si-O-Si that exist between 1055 and 1065 cm^{-1} .